## Abstract

POWER TOOTHBRUSH WITH BRUSHING PRESSURE FEEDBACK

The vibrating toothbrush includes a first arm portion with a brushhead mounted at a free end and a second arm portion joined by a hinge-like portion. The first and second arm portions have first and second natural resonant frequencies. A spring member connects the second arm portion to the first arm portion, and a solenoid actuator is also connected between the first and second arm portions. A contact switch assembly is responsive to a DC battery voltage such that when the switch is closed, the first arm portion is drawn in one direction by the actuator, which results in compression of the spring and opening of the switch, with the compressed spring moving the first arm portion in the opposing direction until the switch again closes, so that the brushhead moves back and forth with the opening and closing of the switch. A pressure feedback arrangement makes use of the spring element and a nodal mount which extends from the spring at a selected point therealong to the handle of the toothbrush. The first and second natural resonant frequencies are selected such that when the brushhead is loaded with a selected amount of pressure, there is substantially no vibration transmitted to the handle.